



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
 United States Patent and Trademark Office
 Address: COMMISSIONER FOR PATENTS
 P.O. Box 1450
 Alexandria, Virginia 22313-1450
 www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/509,132	09/27/2004	Wayne Kenneth Aldridge	02157.0017U1	1970

23859 7590 12/22/2006
 NEEDLE & ROSENBERG, P.C.
 SUITE 1000
 999 PEACHTREE STREET
 ATLANTA, GA 30309-3915

EXAMINER

RAO, SHEELA S

ART UNIT	PAPER NUMBER
----------	--------------

2125

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	12/22/2006	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 10/509,132	Applicant(s) ALDRIDGE ET AL.	
	Examiner Sheela Rao	Art Unit 2125	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 September 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 September 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>see attached</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-14 are pending and presented for examination.
2. Applicant's submission of references on form PTO-1449, filed 9/27/04 and 5/30/06, have been considered. A signed copy of each form is attached.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 5 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 5 claims a "means to detect the absence of mains power ... the controller is arranged to operate in the absence of mains power"; yet, it is not clear whether this "absence of mains power" is related to the grid, the local grid, or site level. Correction is required.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-7, 12, and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by International Publication WO 01/61820 A1 issued to Chambers et al.

The invention of International Publication to Chambers et al. (hereinafter "Chambers") teaches of a system for the generation and distribution of energy to a region. In explanation of the invention, the disclosure anticipates the elements of the instant invention. As per the limitations of instant claims 1 and

14, the power distribution/generation system is taught as system 10, shown in Figure 1, for supplying electrical power to a number of sites, i.e. the sub-regions 12. At least some of the sites comprising a generator is shown as the GES units 11 and the generators being linked together on a local network is called the second energy distribution system 16 in region 100. The local network being connected to an external power grid is explained at lines 21-23 on page 11 and at lines 21-22 on page 4. The use of a controller is shown by the global controller 28 as explained on page 14, lines 10-12, to control the distribution of power so that a site is supplied with electrical power from the local network is taught on page 8, lines 19-23 and page 12, lines 4-5. The aspect of the power being drawn from the grid if the total power demand of the sites exceeds the power generated is taught at lines 5-8 on page 12 of the reference's disclosure.

With regard to instant claim 2, the use of generators that are Stirling engines and the Stirling engine being of the linear free piston type, as Applicant states in the instant specification at lines 5-8 of page 8, the use and operation of such is well known in the art.

Claim 3 defines the controller to be arranged to export excess power to the grid if the power generated exceeds the power demand of the local network. Chambers addresses this feature on page 12, lines 5-8.

As per the generators in the local network are routed through the hub which is connected to the grid which is claimed by instant claim 4. Chambers shows a global controller 28 that is defined as the gateway of the individual GES units and contains software to control the whole system, see page 14, lines 10-12.

With regard to the means for detecting the absence of mains power, wherein the controller is arranged to operate in the absence of mains power to supply electrical power to selected apparatus as claimed by claim 5, Chambers teaches the detection of a break in the distribution system and generator operating in stand-alone mode to maintain power to the individual sub-region, see page 5, lines 9-11.

Claim 6 defines that upon detection of the absence of mains power the controller is arranged to selectively supply electrical power to designated emergency sockets. On lines 3-7 of page 13, Chambers teaches that "control priority can be altered to suit loads which require reliable no-break power."

The means to detect excess power demand and trimming of the peak voltage as per instant claim 7 is taught by Chambers through the use of the PLC 27 with the global controller 28 as disclosed beginning on page 12, line 1.

With regard to instant claim 12, wherein the method for supplying electrical power to numerous sites or sub-regions is claimed, Chamber teaches the monitoring of power generated by the generators at lines 20-27 on page 2. The monitoring of power demand at each of the sites is explained at page 7, lines 6-7. And, the controlling of distribution of power so that a site is supplied with electrical power from the local network if its demand exceeds power generated by the site's generator is taught at lines 4-5 on page 12 while the power being drawn from the grid if the total power demand exceeds the power generated is taught at lines 5-8 of page 12.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1, 8-11, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over International Publication WO 01/61820 A1 issued to Chambers et al. in view of US Patent No. 6,384,580 B1 issued to Ochoa et al. and further in view of US Patent No. 6,621,181 B2 issued to McCombs.

Chambers teaches the limitations of instant claims, in particular independent claim 1, as aforementioned.

As per claim 8, wherein the use of cables that carry power to and from each site are also used as carriers for the communications signals is claimed, Chambers fails to teach the use of power lines to transmit communication signals. However, the patented disclosure of Ochoa et al. (hereinafter, "Ochoa") explains how the source sharing circuitry can be coupled to the power grid and the communications link so as to enable the transmission of varied forms of data. See the abstract and col. 2:ll. 51-60 and col. 3:ll.

53-64. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have included the communications link of Ochoa with the invention of Chambers so as to allow for efficient and economic advantages in energy management and data communication services.

With regard to claims 9, 10, 11, and 13 that define the use of a power store and the distribution of power, in particular a battery, Chambers fails to teach or fairly suggest the use of such. However, Ochoa teaches the use of sharing the source load at column 3, lines 47, et seq. Yet, the prior art by McCombs, teaches that electrical storage devices such as batteries are capable of alternately storing and discharging electricity are connected to power grids. Significant amounts of power can be stored within these batteries throughout the grid, allowing the grid to meet peak loads by discharging stored power during periods of high demand. See the abstract of McCombs. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have included a power storage and distribution capabilities during disturbances so as to minimize power loss and costs, as well as allowing the power network to stand-alone.

9. For the reasons stated above in paragraphs 6 and 8, the limitations of the claimed invention is taught or fairly suggested by the prior arts of record; thereby, rendering the instant claims unpatentable.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US Patent Application Publication US 2006/0071554 A1 McNamara et al.

US Patent Application Publication US 2005/0098643 A1 Guyer

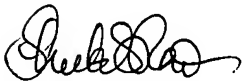
US Patent No. 5,174,117 Naito et al.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sheela Rao whose telephone number is (571) 272-3751. The examiner can normally be reached Monday - Wednesday from 8:30 am to 4:30 pm.

Art Unit: 2125

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo Picard, can be reached on (571) 272-3749. The fax number for the organization where this application or any proceeding papers is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. It should be noted that status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should any questions arise regarding access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Sheela S. Rao
December 18, 2006



**LEO PICARD
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100**